

Current Pesticide Education Trends Across North Carolina

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Background:

In 2008, the Governor's Task Force on Preventing Agricultural Pesticide Exposure, composed of key North Carolina governmental stakeholders, examined current regulations and practices in protecting the health of farmers, pesticide applicators, and farmworkers from harmful pesticide exposures resulting from agricultural use in order to make recommendations needed to improve health protection. At its conclusion, the Task Force made specific recommendations relative to Training, Compliance, and Healthcare. In order to address these recommendations, the NC Department of Agriculture-Structural Pesticide & Pesticides Division was charged with convening an Interagency Pesticide Workgroup.

The Interagency Pesticide Workgroup initiated two sub-committees, one to look at issues related to labor contractors and the other related to pesticide education practices & materials &/or strategies. The Pesticide Training Committee began its work by conducting a survey to determine current trends in pesticide education across North Carolina.

Purpose:

To obtain information to develop recommendations, materials, and strategies that can be used across the state to ensure that pesticide training meets the needs of both pesticide trainers and individuals while ensuring that information being shared is in compliance with state and federal regulations and shares important health messages.

Key Areas Investigated:

- Which farms, organizations, agencies, and/or organizations are providing pesticide training?
- Who is receiving training?
- In what languages training is being delivered?
- What materials and/or strategies are being used during training?
- What key messages about working are being included in training?
- Which materials and/or strategies are felt to be most or least effective in providing pesticide education; and, most importantly.....
- What, if anything, is needed to make delivery of pesticide training easier and more effective?



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Special thanks to the Pesticide Training Subcommittee,
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Agriculture, Structural Pest Control & Pesticides Division

Methods:

- Using a Delphi process, the survey was designed with input from various state, academic, and industry experts. The panel reviewed multiple iterations of the survey for language and content to insure that the construct and face validity could be established. With each iteration improvements in language and content along with format were made until consensus of the panel was reached.
- Next, the online survey was piloted by multiple community representatives to determine if the process of data collection and the ease of instrument use was sufficient. Further, the pilot gave information regarding the consistency in measurement to establish reliability.
- Distribution of the online survey went to partnering agencies representative of individuals who would either provide pesticide education in public or private domains through an email request with a web link for ease of access.



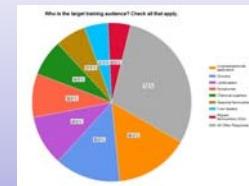
Respondents:

- 81 individuals started the survey but only 78 completed every question in the survey
- 65% of respondents were male and 35% were female.
- Mean age of respondents was 45.3 years
- Included:
 - Cooperative Extension Agents (56.3%)
 - Growers (15%)
 - University Faculty/staff members (12.5%)
 - Healthcare workers or lay health providers (6.3%)
 - Department of Agriculture or Department of Labor (1.3%)
- 65% described themselves as pesticide trainers who provide pesticide training to 51 or more people each year

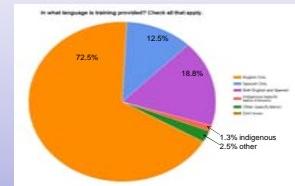
What is Needed to Improve Pesticide Education:

- More frequent updates to pesticide education materials; additional bilingual materials & trainers; training that can be tailored to specific location/commodity
- More interactive, hands-on training activities; supply PPE for demonstration
- Provide incentives to growers to train workers; train everyone – growers, crew leaders, & farmworkers
- More resources for travel, materials, staff time; electronic resources for updates & trainer certification

Top Ten Target Training Audiences

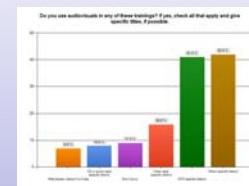


Languages Used for Training



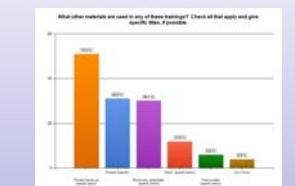
Other languages: Nahuatl

Audiovisuals Used in Training



Other: Power Points from NC State University & NC Department of Agriculture; documentary on farmworkers' perceptions of pesticides

Other Materials Used in Training



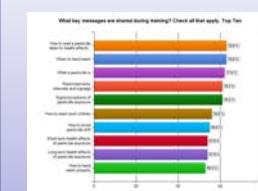
Other: Print materials from NC Departments of Labor and Agriculture, NC Cooperative Extension & EPA; black light, product labels

Most Effective Training Strategies

- Interactive (70%)
- One-on-one (55%)
- Lecture (43.8%)

Least Effective Training Strategies

- Electronic
- Lecture
- Don't know



51% of respondents indicated that they train on selection, fit, use, and storage of personal protective equipment



Limitations: 1) Convenience Sample; 2) Convenience Sample; 3) Complex survey; 4) Multiple viewers; 5) Low Response rate; 6) External state participants; 7) Skewed to Cooperative Extension; and 8) limited grower/certified applicator participation